

DETAILED ACTION

1. This Office Action is responsive to the correspondence filed 06/06/2011. Claims 1-37 were and remain pending, with claims 1 (system), 13 (method), 25 (computer readable medium or CRM) and 37 (system) as independent claims.

Claim Rejections - 35 USC § 101

2a. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2b. Claims 25-36 are rejected under 35 U.S.C. 101 because the claimed inventions are directed to non-statutory subject matter.

Claim 25: claims a computer-readable medium which could be interpreted as transitory propagating signals per se (see further explanation below) thus directed to non-statutory subject matter. Claims 24-36, dependents of claim 25, are rejected for the same reason.

A memo signed by USPTO Director Kappos in January, 2010, entitled "Subject Matter Eligibility of Computer Readable Media" provided guidance regarding "computer readable medium" / "machine readable medium" claims.

The document states, "the broadest reasonable interpretation of a claim drawn to a computer readable medium ... typically covers forms of non-transitory tangible media and transitory propagating signals per se in view of the ordinary and customary meaning of a

computer readable media, particularly when the specification is silent. See MPEP 2111.01.” The document further states that if a claim is drawn to a computer readable medium which covers both transitory and non-transitory embodiments, the claim may be amended (to cover only statutory embodiments) with the recitation “non-transitory.” Further, the document states that such an amendment will normally not trigger a new matter issue even if the specification is silent unless the specification “does not support a non-transitory embodiment because a signal per se is the only viable embodiment....”

Here the specification is silent on this issue and it does not appear the specification discloses that a signal per se is the only viable embodiment thus amending the claim as suggested above would overcome this rejection.

2c. Previous rejections of claims 10-12 under 35 U.S.C. 101 are withdrawn following amendment thereof that overcame the rejections.

(“ the consumer receiving ” etc.. is considered part of a definition of acts done by a consumer following actions performed by the system (specifically some part of the “consumer order management system” of claim 1. In other words, **following amendment of claim 1**, the consumer is no longer seen as being claimed as an element of the system.)

Claim Rejections - 35 USC § 112-2nd paragraph

3a. The following is a quotation of the second paragraph of 35 U.S.C. 112:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3b. Previous rejections of claims 1-37 under 35 U.S.C. 101 are withdrawn following amendment thereof that overcame the rejections.

3c. Claims 1-37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1: the scope of this method claim is not clear because:

a) **line 4:** does the computer system (s) (plural), each have an interface? ;

line 5: “ a consumer demand .. to be received at a future date”: this phrase sounds like the consumer already chose a date of delivery whereas the rest of the claim recites the date is to be determined later upon notification of the incentives and payments the delivery dates. Further how can a date chosen a priori by the consumer, which the claim seems to call the “order lead time”, turns out to be longer than a supply channel delay between 2 merchants as claimed at lines 10-12 and represents a certain cost savings as claimed at lines 12-14?

b) **line 9:** “between the future date” : which future date is this? the one chosen a priori by the customer at line 4, before knowing of the incentives?

It appears, to remove the indefiniteness, a step of the consumer choosing a certain date of delivery, has to be claimed, after being notified of the incentives and related payments and delivery dates. Further it seems the claim requires that the delivery date chosen be at least longer than a supply channel time between 2 merchants. If this is the case, the claim language has to be clarified to convey such requirement. In other words the requirement has to be communicated to the consumer. It seems a step of acceptance of such delivery date has to be claimed as well. As claimed the system does not seem to work.

c) **lines 19-23:**” such that .. for the incentive”: it is not clear whether the product is actually shipped out since this is only a statement of purpose. Since the phrase is subject to two possible interpretations (a step of shipping the product is claimed or such step is not claimed) , the claim

scope is not clear. (Note: For prior art application purposes this phrase, as mere statement of purpose, does not carry patentable weight. Thus lines 18-23: are interpreted merely as a consumer management system merely communicating an order (to who, the system does not know) , thus if a prior art reference discloses a system capable of communicating a message, the prior art reference discloses lines 18-23).

**Independent claims 13, 25, 37 contain similar language and are likewise rejected.
All dependents of these claims are rejected based on their dependency.**

3c. Claims 5-9, 17-21, 29-33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 5, 9: Similarly as with claim 1, the scope of this method claim is not clear because of a step of the consumer being informed of and accepting a required order lead time that is longer than a certain supply channel delay seems to be missing.

Similarly as with claim 1, “such that .. for the incentive”: it is not clear whether the product is actually shipped out since this is only a statement of purpose. Similarly as with claim 1, 2 interpretations are possible, thus the claim is indefinite. Also the phrase is given no patentable weight , as with claim 1.

Claims 6-9, dependents on claim 5 are rejected based on the dependency.

Claims 17-21, 29-33 parallel to claims 5-9 are likewise rejected.

Claim 9 and its parallel have the same problem as well.

Claim Rejections - 35 USC § 112, first paragraph

4. Upon further consideration, rejection of claims 3, 7, 15, 19, 27, 31 under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement is withdrawn. It is estimated from the disclosure that a skilled artisan would be able to practice the inventions without undue experimentation.

Nomenclature and interpretation

5. For brevity, the following nomenclature (matching the claims language) is used:

DE : “Downstream supply chain entity”

UE: “Upstream supply chain entity”

SCD = “a supply channel delay between the DE and an UE”. Note: it is interpreted that by definition the SCD is a time that must elapse before a product in inventory of the UE can be made available to a consumer at the DE.

OLT: (customer) “order lead time”. This is when a customer agrees to take delivery of a product at a later time than a current time at a DE.

Claim Rejections - 35 USC § 103

6a. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6b. Claims 1-8, 10-20, 22-32, 34-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Franco US 7257552, (*herein “Franco”*), in view of Official Notice (with e.g. Norris et al, US 5510780 or Masuda US 5569897 as support thereof), in view of Chen, Fangruo; "Market Segmentation, Advanced Demand Information, and Supply Chain

Performance," Manufacturing & Service Operations Management, Winter 2001, v3i1 pg53; Proquest #576021031, *herein "Chen"*, and further in view of Rema Hariharan and Paul Zipkin, Customer-Order Information, Leadtimes, and Inventories Journal or Book Title: Management Science 1995 41:1599-1607, *herein "Hariharan"*.

A priori, as discussed in the section regarding the second paragraph of 35 U.S.C. 112 above, many limitations do not carry patentable weight. Thus the prior art does not have to disclose them. To advance prosecution, the Examiner has provided prior art that disclose some of those limitations, however, note that this is not required to make a prima facie case.

Independent claims 1, 13, 25, 37:

Franco discloses consumer products distribution system, customer interface to place orders, customer specifying delivery schedule for "predictive purchasing", collaboration system along supply chain to reduce costs to all involved including consumers (e.g. abstract, Fig 1, 28A and associated text; excerpts below). Consumers are given incentive discounts to promote the use of Predictive Purchasing, which significantly improves supply chain productivity (e.g. abstract, Fig 28A and associated text; excerpts below; especially col. 52 lines 26-67).

Franco further discloses at least the following system and software:

Description Paragraph - DETX (119):

Each Inventory Provider 130 can communicate with the following: (1) The VIMS 200 to fill consumer orders from its Inventory Site 112 or to obtain consumption statistics and forecasts, Virtual Inventory status, and real-time data on consumer orders. (2) The OIMS 111 of a Retailer 110 to negotiate product supplies, optimize product distribution, minimize total inventory, and reduce distribution cost and time. (3) Each Inventory Site 112 to which it supplies products for the matters related to product deliveries. (4) The PTSS 300 for deliveries or pickups, and time updates for pending deliveries or pickups.

Relevant excerpts follow:

Abstract :

A real-time transaction processing Consumer Products Distribution System (PDMS) reduces distribution costs, facilitates the distribution of products to consumers and makes online shopping practical. The PDMS integrates Collaborative Inventory Sharing, Order Aggregation, Consumer Predictive Purchasing, Product Transport Support Service, Display Shops, Uniform Consumer Preference Codes, Integrated Virtual Technical Support Centers, and other convenient features. Consumers purchase products through web sites of local and remotely located retailers preferably using Predictive Purchasing. The items purchased from multiple retailers are aggregated at a consumer selected Order Aggregation Site (OAS) based upon a consumer specified schedule. The consumer can pick up the aggregated orders at the selected OAS or have the aggregated orders delivered to a residence. Commercial carriers process consumer parcels at OASs where they are combined with Aggregated Orders for pickup or delivery. Consumers are given incentive discounts to promote the use of Predictive Purchasing, which significantly improves supply chain productivity.

(col.1 lines 13-20) :

This invention relates generally to a method and system for improving the efficiency and reducing the cost of distributing and selling products to consumers. More particularly, the invention relates to Internet based methods and systems for Just-In-Time product distribution, inventory sharing, order aggregation, consumer predictive purchasing, and other conveniences and benefits that provide incentives for consumers to shop online.

(col. 3 lines 6-24)

One aspect of the invention relates to Consumer Predictive Purchasing. In the current product distribution space, vast amounts of extremely valuable predictive consumption data stored in the minds of individual consumers are lost every day to the detriment of the supply chain and the economy. This aspect provides a system and method to collect and store, in real-time, predictive consumer consumption data. The use of this data in supply chain planning and forecasting can significantly contribute to major cost reductions in product manufacturing and distribution. In one embodiment of this invention, consumers are offered incentive discounts to use the infrastructure provided by the PDMS for predicting their consumption needs at a future date and placing Predictive Purchase orders scheduled for future delivery to fulfill the predicted needs. The incentive discounts can be determined by appropriate algorithms designed to ensure extensive consumer participation. This aspect is discussed in Sections, II.A.7 and VIII of the Detailed Description of the

Invention.

(col.6 lines 1-10)

One specific object of this invention is to provide a system and method for coordinating the operation of the Collaborative Inventory Sharing aspect. This system and method gives each participating merchant the opportunity to minimize inventory and costs while offering a broader selection of products and better service to consumers. This system and method also offers retailers the opportunity to broaden their customer base, negotiate better terms and prices for their product acquisitions, balance and reduce inventories, and eliminate unnecessary product transportation costs.

(col. 6 lines 20-23)

Another specific object of this invention is to provide a system and method for coordinating Consumer Predictive Purchasing. This system relies upon incentive discounts to encourage consumers to use Predictive Purchase Orders.

(col.7 lines 6-18)

All participants in the distribution chain, such as manufacturers, wholesalers, distributors, retailers, and consumers can derive benefits from this invention. Manufacturers can obtain accurate real-time data upon which to base production plans. Using a Just-In-Time business model, wholesalers, distributors, and retailers can operate efficiently, with reduced inventories, product costs, shipping costs, and shipping times. Retailers can ensure that no sales are lost due to lack of inventory and can better serve their customers with broader product selections. At the end of the distribution chain, consumers can shop comfortably from home, buy products at more competitive prices, receive their purchases more quickly, and have little or no need to drive for shopping.

(col. 15 lines 32-51)

Consumer Predictive Purchasing

The VIMS 200 preferably manages and coordinates the operation of specialized application programs that support Consumer Predictive Purchasing. One of these programs helps consumers predict and plan their household consumption. Another computes incentive price discounts. Using the infrastructure provided by the PDMS 100, consumers can obtain significant price discounts on Predictive Purchase orders scheduled for delivery at some future time determined by the consumer's prediction. The consumer ordering data can be collected and processed by the PDMS 100 in real-time to generate consumption reports that are available to the affected participants in the product distribution path, from

the manufacturers that produce the products to the retailers that receive the purchase orders. This information gives the manufacturers the opportunity to generate accurate production forecasts and manufacturing schedules and provides the necessary infrastructure for the entire product distribution chain to approach a Just-In-Time operating model.

Description Paragraph - DETX (92): (col.16 lines34-56):

Architecture scalability:

In a preferred embodiment of this invention, the architecture of the VIMS 200 is scalable through a component-based API which allows programmatic access to low level data structures and functions. This feature allows flexible customization of the VIMS 200 to meet specific business requirements through the use of specialized application programs. Examples of such specialized application programs are:

(1) A program that coordinates the use of an OAS 400

for shipping and receiving parcels as a convenience to consumers.

(2) A program that optimizes the use of the trucks associated with the PTSS 300 by optimizing schedules and itineraries subject to system constraints.

(3) A program that computes minimum acceptable inventory levels for the most efficient operation of Inventory Sites.

(4) A program that helps consumers predict and plan household consumption to enable them to take advantage of the incentive discounts associated with Consumer Predictive Purchasing. (5) A program that manages and coordinates the operation of Integrated Virtual Technical Support Centers.

(col. 52 lines 12-25)

In one embodiment, the VIMS 200 provides web based programs that operate with consumer specific historical consumption data stored in the Consumer DBM 239, to help consumers predict their future consumption needs. Using such programs, the Consumer 120 can obtain reasonable estimates of future household consumption and then use these estimates to place Predictive Purchase orders to fulfill consumption needs at some future time. To promote the use of Predictive Purchase orders, Retailers 110 can offer special incentive discounts to consumers that place Predictive Purchase orders scheduled for delivery at some future time to fulfill the predicted needs. These special incentive discounts provide a powerful vehicle for collecting predictive consumption data from consumers.

(col. 52 lines 26-39)

To support Predictive Purchasing, the VIMS can provide specialized application programs that estimate supply chain cost savings resulting from Predictive Purchasing and correlate such savings with the Predictive Purchase Delay (PPD). As used herein, Predictive Purchase Delay (PPD) is the time span

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between the time the consumer places a Predictive Purchase order and the time the consumer agrees to take possession of the goods purchased. The specialized application programs also correlate the PPD to the incentive price discounts offered to consumers to enable retailers to tailor incentive discounts to the markets they serve and the business models they use. In general, the longer the PPD is, the larger the achievable supply chain cost savings and the incentive price discounts are.

(col. 52 lines 40-67)

The use of Predictive Purchasing can bring major economic benefits to the entire supply chain, some of which can be passed to consumers in terms of incentive price discounts. For purposes of illustration, assume that based upon historical consumption records maintained by the VIMS 200 on the behalf of a specific consumer, Predictive Purchase orders for milk can be placed by that consumer with a PPD of 10 days. When the consumer places a Predictive Purchase order, preferably the ordering information becomes available in real-time to all the participants in the supply chain, from the dairy that processes the milk to the retailer that receives the order. Once a significant percentage of consumers adopt Predictive Purchasing, the dairy can accurately plan and schedule production and significantly improve productivity. Likewise, the distribution system can operate efficiently with Just-In-Time scheduling. Milk containers can be shipped from the dairy to regional distribution centers and within a few hours be transported by the PTSS 300 to each designated OAS 400 Just-In-Time to meet Order Aggregation schedules. Accordingly, the dairy-to-consumer distribution time and the total inventory of milk in the distribution pipeline can both be reduced to a minimum. In addition, the costs otherwise experienced by Retailers 110 for keeping milk in inventory in expensive shelf space, and other costs associated with handling, spoilage, and overhead can be eliminated. In general, similar productivity improvements for both perishable and non-perishable products can be achieved at most stages of the supply chain.

(col. 52 lines 26-39)

To support Predictive Purchasing, the VIMS can provide specialized application programs that estimate supply chain cost savings resulting from Predictive Purchasing and correlate such savings with the Predictive Purchase Delay (PPD). As used herein, Predictive Purchase Delay (PPD) is the time span between the time the consumer places a Predictive Purchase order and the time the consumer agrees to take possession of the goods purchased. The specialized application programs also correlate the PPD to the incentive price discounts offered to consumers to enable retailers to tailor incentive discounts to the markets they serve and the business models they use. In general, the longer

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the PPD is, the larger the achievable supply chain cost savings and the incentive price discounts are.

(col. 53 lines 1-4)

FIG. 28A illustrates a method 2800 by which specialized application programs can estimate supply chain cost savings, correlate them with the PPD, and derive appropriate incentive price discounts for Predictive Purchases.

(col. 53 lines 16-26)

At step 2803, the correlation between PPD and incentive price discounts offered to consumers is identified. This correlation can be established empirically by a set of statistical experiments using a range of PPD values and a range of incentive price discounts. A separate experiment is conducted for each PPD value whereby each experiment involves offering various incentive price discounts and recording the number of Predictive Purchase Orders placed by consumers that take advantage of each price discount. From this data the correlation between PPD and incentive price discounts can be statistically evaluated.

(col. 53 lines 27-37)

At step 2804, the correlations identified in steps 2802 and 2803 are analyzed to establish the incentive price discounts that generate the desired cost reductions. Various types of criteria can be used to perform this analysis. For example, a criterion can be maximizing profitability after accounting for price discounts. At step 2805, the incentive price discounts associated with the respective PPDs are applied. At step 2806, data representing online orders for the product is collected and stored over time. This data extends to the full range of PPD values and their respective incentive price discounts and includes the case where the PPD is zero.

(col. 53 lines 38-48)

At step 2807, the data collected over time is periodically analyzed to establish revised incentive price discounts. At step 2808, the revised incentive price discounts associated with the respective PPD values are applied to the product. After step 2808, the process loops back to step 2807 and remains in an infinite loop, which over time periodically revises the incentive price discounts to obtain optimum performance in accordance to a specified criterion. For example, the long-term average price paid by consumers for the specific product is maintained at a minimum to control inflation.

Thus Franco discloses, at the citations and excerpts above, all of claims 1, 13, 25, 37 and 2, 14, 26:

A computer-implemented system for distributing consumer demand upstream in a supply chain, comprising:

one or more computer systems (see Fig 1, computer systems are e.g. item 111: "OIMS" or item 200: "VIMS") comprising:

a) a user interface (e.g. Fig 1 item 120: consumer shopping online; Fig 20 item 120, consumer browser) configured operable to:

a1) receive a consumer demand for a product to be received at a FUTURE DATE
(see e.g. col. 52 lines 26-39 and excerpts above);

b) a quote system (e.g. Fig 1 item 113: storefront; or Fig 20 item 113: web storefront; e.g. Fig 28A, item 2803: "price offered" reads on quote and consumer acceptance or rejection) coupled configured to:

b1) receive, from the user interface, the consumer demand for the product;

b2) determine an incentive based on an OLT for the product, the OLT for the product representing a time difference between the FUTURE DATE and the current date, the OLT being longer than a supply channel delay between a DE and an UE, **the incentive reflecting cost savings to the DE associated with the OLT (see e.g. col. 52 lines 26-39 and excerpts above; see FIG. 28A which illustrates a preferred method by the PDMS to correlate price discount to Predictive Purchase Delay (PDD); the PDD reads on the claimed OLT); and**

b2) communicate the incentive (a price discount on the product) to the user interface (see e.g. col. 52 lines 12-25, and 26-39 and excerpts above),

wherein the user interface is further configured operable to:

- a2) receive the incentive from the quote system (see above); and
- a3) communicate the incentive to a consumer (see col. 52 lines 12-25 and excerpts above);

and

c) a consumer order management system (COMS) (e.g. Figure 1, item 111: "OIMS" or item 200: "VIMS" which includes "order generation module, order processing module, see col. 8 lines 5-9) configured to:

c1) communicate an order for the product to the UE (e.g. see Figs 6A-7B: order generation module) (to allow the consumer to receive the product at the FUTURE DATE from current inventory of the UE rather than from current inventory of the DE in exchange for the incentive) (see excerpts above: Just in time delivery model disclosed at excerpts above reads on receipt from current inventory of the UE since in Franco all lead delivery times as minimized).

(NOTE: though disclosed by Franco, the "to allow.." and "the cost savings...comprising..." limitations, (if any not deleted) are also interpreted as statements of purpose or effect (or natural consequence of the previous steps) only, thus do not need to be given patentable weight. This applies to all claims below having similar limitations).

As to the limitation of "determining, by the computer, an initial payment and one or more interim payments due prior to the consumer receiving the product; communicating, by the computer, the incentive and payments to the consumer" Franco does not disclose such.

However, Official Notice is taken that interim payments are old and well-known: e.g. in sales by merchants of big ticket items such as household major appliances or cars, see e.g. Norris et al, US 5510780 that also discloses such sales are beneficial to both merchants and consumers (C1 l. 17-30). See e.g. Masuda US 5569897 disclosing installment payments are allowed by retailers and promotes sales.

Because it is obvious to follow customary practices, thus it would have been obvious to a PHOSITA to add these customary and well-known practices of installment payments to promote sales, for the benefit of merchants and consumers alike (see e.g. Norris, Masuda, supra). In case of an installment payment it would have been obvious that the customer must be apprised of the payment plan and thus it would have been obvious that a skilled artisan would have known to modify the Franco system to include such computing by a computer.

With installment payments, Official Notice is taken that there usually is an initial payment followed by a number installment payments. Thus it would further be obvious there would be an initial payment followed by a number installment payments in the Franco system modified as above discussed, and thus it would have been obvious to notify the consumer of such payments so she can pay as scheduled.

Franco teaches a web-based system where "Retailers 110 can offer special incentive discounts to consumers that place Predictive Purchase orders scheduled for delivery at some future time to fulfill the predicted needs.."' (col. 52 lines 12-25). Figure 28. "Predictive Purchase Delay (PPD) is the time span between the time the consumer places a Predictive Purchase order and the time the consumer agrees to take possession of the goods purchased. The specialized application programs also correlate the PPD to the incentive price discounts offered to consumers to enable retailers to tailor incentive discounts to the markets they serve and the business models they use. In general, the longer the PPD is, the larger the achievable supply chain cost savings and the incentive price discounts are." (col. 52 lines 26-39). Franco also teaches correlations between discounts, cost savings and PPD's(including the case where the PPD is zero) to optimize cost savings (col. 53 lines 27-37); (col. 53 lines 38-48).

Chen, Fangruo; "Market Segmentation, Advanced Demand Information, and Supply Chain Performance," Manufacturing & Service Operations Management, Winter 2001, v3i1 pg53; Proquest #576021031, 15 pgs.

Further Chen discloses the customer can select from a menu of discounted price-delay combinations (p. 65) and that prices vary inversely from delays (p. 56).

It would have been obvious to add Chen's teachings of discounted price-delay combinations to Franco since both are in the same art and Chen merely supplements similar teachings of Franco.

However neither Franco nor Chen discloses the customer is offered a specific combination of discounted price and order delay time (called "order lead time"), where the order lead time is specified (required) to be longer than a particular supply chain delay time between 2 particular merchant entities. (This is the interpretation of the independent claims).

Franco also does not disclose the product is delivered from current inventory of the upstream entity rather than current inventory of the downstream entity and that the incentive is partially based on cost savings due to such delivery.

However Rema Hariharan and Paul Zipkin, Customer-Order Information, Leadtimes, and Inventories Journal or Book Title: Management Science 1995 41:1599-1607, (Hariharan) teaches that if a consumer demand lead time L subscript D is made longer than a supply lead time L subscript S then there is no need for a merchant to ever hold inventory, thus this is "perfect customer service at zero cost; nothing could be better". See at least p. 1601 left column, 1st full paragraph.

In the system of Franco and Chen that teaches that customers are proposed different discounted price-delay combinations, and that merchants want to decrease their costs, in view of Hariharan, it would have been obvious for a merchant to propose to a consumer a lead time that is longer than their supply lead time to decrease their costs as taught by Hariharan.

Note that no inventory at the DE (as taught in Hariharan) means that the product is delivered from current inventory of the upstream entity (UE) rather than current inventory of the downstream entity (DE) as claimed. Also, Franco teaches that incentives are based on cost savings (e.g. no inventory costs as taught by HARIHARAN), thus it would have been obvious

that the incentive is partially based on cost savings due to such delivery (i.e. from current inventory of the upstream entity rather than current inventory of the downstream entity).

(Further note that Franco teaches cost savings incurred throughout the supply chain).

Thus Franco and Chen and HARIHARAN as discussed above disclose independent claims 1, 13, 25, 37.

Rejection of claims 5, 17, 29:

At p. 1065, under caption "6. Multi Stage Systems", 1st and 2nd full para., Hariharan et al. teaches 3 merchants:

- 1) the "stage 2 merchant" of HARIHARAN is the same as our "DE" who provides goods to the customer;
- 2) the "stage 1 merchant" of HARIHARAN is the same as our 1st UE; and
- 3) HARIHARAN implicitly disclosed at least another party, further up the chain, ("an external source which supplies stage 1") which is the same as our "2nd upstream merchant" (or "2nd UE") ---

In HARIHARAN, supply lead time from the further up "external source "(our "2nd UE") to stage 1 merchant (our "1st UE") is LS1. That of stage 1 merchant to stage 2 merchant (our "DE") is LS2. Thus the combined supply lead time from the further up UE (our "2nd UE") to stage 2 merchant (our "DE") is expressed as $LS2 = LS1 + LS2$. See p. 1065, discussing "multi stage systems", 1st full paragraph. Further the 2nd and 3rd sentences of the 2nd full paragraph p. 1065 of Hariharan teach that if the consumer demand lead time $L_{subscript D}$ is longer than the $LS2$ (combined supply lead time from the further up "external source "(our "2nd UE") to stage 2 merchant (our "DE")) then there is no inventory to hold at either stage 1 or stage 2. That means there are costs savings (no inventory costs) at our DE and our 1st UE.

In the system of Franco and Chen that teaches that customers are proposed different discounted price-delay combinations, and that merchants want to decrease their costs, in view of the above teaching of Hariharan, it would have been obvious for our DE and 1st UE to

propose to a consumer a lead time that is longer than their combined supply lead times (which is LS_2 in HARIHARAN) to decrease their (at least inventory) costs, at both merchants, as taught by Hariharan.

Thus Franco and Chen and HARIHARAN, as discussed above, disclose claim 5 and its parallel 17, and 29:

a second upstream supply chain entity (“our “2nd UE”) further up the supply chain from the downstream supply chain entity (i.e. our “DE” being the same as the “stage 2 merchant” of HARIHARAN) than the first upstream supply chain entity (“stage 1 merchant of” HARIHARAN”);

determining a second particular incentive based on a second order lead time for the product, the second order lead time for the product representing a time difference between a second particular future date and the current date, the second order lead time being longer than a second supply channel delay between the downstream supply chain entity (i.e. our “DE” being the same as the “stage 2 merchant” of HARIHARAN) and a second upstream supply chain entity (our “2nd UE” or “external source” in HARIHARAN) (i.e. require L subscript D to be longer than LS_2),

the second particular incentive being at least partially based on collective cost savings to the downstream supply chain entity and the first upstream supply chain entity (*Franco teaches incentive is a function of savings and here there are savings for both merchants so it would have been obvious to base the incentive on the collective savings of both merchants*) associated with the second order lead time (*in HARIHARAN, the 1st UE is “associated with the 2nd OLT” because he achieves no inventory costs based on that 2nd OLT*)

the second particular incentive being larger than the first particular incentive (*Franco teaches the longer the delay, the larger the incentive. HARIHARAN teaches the 2nd OLT is more than $LS_1 + LS_2$, i.e. longer than the 1st OLT which is based on the LS of only the DE, e.g. LS_2 only*) .

Note that no inventory at the DE and the 1st UE means that the product is delivered from current inventory of the 2nd UE upstream entity ("external source" in *HARIHARAN*) rather than current inventory of the downstream entity or the 1st UE as claimed. Franco teaches incentive based on cost savings (e.g. no inventory costs as taught by *HARIHARAN*) thus it would have been obvious that the incentive is partially based on cost savings due to such delivery (i.e. from current inventory of the 2nd UE rather than current inventory of the DE or that of the 1st UE).

Rejection of other claims or limitations:

The limitations of the above-listed claims 1-8, 10-20, 22-32, 34-37, if not explicitly discussed above, are nonetheless disclosed either in one of the above references or are obvious in view of the prior art cited and the level of skill shown therein.

Response to Arguments

7. Applicant's arguments filed 06/06/2011 have been fully considered and are persuasive.

Upon further consideration, independent claims are interpreted as a particular incentive given to the consumer is a function of (or based on) a particular order lead time with the further condition that the order lead time be longer than a supply channel delay between 2 particular merchant entities. Applicant has been persuasive in arguing that the order lead time is not inherently longer than the supply channel delay as earlier interpreted. See Applicant's arguments at

Thus the previous rejections of claims 1- 11, 13-23, 25-35, and 37 under 35 U.S.C. 103(a) as being unpatentable over Franco US 7257552 in view of Official Notice (with e.g. Norris et al, US 5510780 or Masuda US 5569897 as support thereof) are

withdrawn. A new ground of rejection is entered however.

Allowable subject matter

8. Claims 9, 21, and 33 would be allowable if all indefiniteness issues are corrected. The prior art of record does not fairly disclose a third incentive and third order lead time, the third incentive being larger than the first and second incentive, as claimed. The closest US patent is Franco, cited above. The closest non patent prior art are HARIHARAN then Chen, cited above.

The closest foreign patent prior art reference is: CZUBA et al. WO 9945450 which discloses a computerized manufacturing process control program which processes customer orders, generates external purchase orders and internal work orders, manages inventory, and generates an anticipated ship date for the completion of the customer order, calculates lead time available-to-promise date, and the total quantity of manufactured parts which are available-to-assemble from current inventory.

However CZUBA alone or in combination with the above cited prior art does not, nor does any of the above references alone or in combination, disclose the combination as claimed where the customer is offered a specific combination of a third incentive and third order lead time, where the order lead time is specified to be longer than a particular supply chain delay time between 2 particular merchants entities, and the third incentive being larger than the first and second incentive, as claimed.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh H. Le whose telephone number is 571-272-6721. The Examiner works a part-time schedule and can normally be reached on Monday-Wednesday 9:00-6:00. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's

supervisor, Namrata Boveja can be reached on 571-272-6805. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300 for regular communications and for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-3600. For patent related correspondence, hand carry deliveries must be made to the Customer Service Window (now located at the Randolph Building, 401 Dulany Street, Alexandria, VA 22314). Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Khanh H. Le/

Primary Examiner, Art Unit 3862